## Introduction

he 2001 Regional Transportation Plan (2001 RTP) presents a long-range vision of the regional transportation system, from the present to the year 2025, for the six southern California counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. The Southern California Association of Governments is an agency which includes general purpose local governments within those counties as its members, as well as representation from the several county transportation commissions/authorities or comparable agencies. SCAG is responsible under both federal and state statutes and regulations to adopt such a vision and update it regularly.

The transportation system in the SCAG region is a complex multi-modal aggregate of highways, local roads, rail transit, bus transit, airports, seaports, non-motorized, and freight facilities. It serves a current population of over 16 million people today, and must serve an additional 7 million people by the year 2025. The system supports a variety of trips both intra- and interregional, for work, for goods movement, and for recreation. It is imperative that the transportation system be maintained not only for personal mobility purposes but also to for regional economic vigor.

Traditionally, the major problem that transportation systems planning has faced is providing mobility. More recently, however, providing that mobility within the constraints of air quality and realistic financing have made the transportation planning arena even more complex. Nonetheless, the 2001 RTP offers the region a pathway to maintaining and improving mobility within the mandated financial and air quality constraints.

It is clearly recognized that transportation planning is a dynamic process. The Plan is intended to be a guide or outline for major investment decisions over the next 25 years. At a minimum, the Plan is to be updated every three years in response to changing conditions and new forecasts of population, jobs, and housing. As conditions warrant, the Plan may be amended more frequently.

The Appendix to the 2001 RTP is designed to be both a technical support document for the Plan, which was adopted by the SCAG Regional Council on April 12, 2001, as well as a technical plan in itself. It is designed to provide the reader with the technical information that supports major transportation policy decisions as well as to "tell the story" of why certain policy decisions are being made. Just as the Plan is to be updated regularly, the Appendix, which represents the technical data bases, will also be the repository of improved information.

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## Format of the Appendix

The Appendix is organized into fifteen (15) appendices by major topics addressed in the 2001 RTP. The following is an outline of the Technical Appendix:

Introduction (including Goals, Policies and Objectives)

Appendix A - Socio-Economic Data

Appendix B - Aviation

Appendix C - Highways and Arterials

Appendix D - Transit

Appendix E - Goods Movement

Appendix F - Finance

Appendix G - Maglev

Appendix H - Transportation Conformity

Appendix I - Environmental Justice

Appendix J - Plan Performance

Appendix K - Project List

Appendix L - Task Forces

Appendix M - Public Outreach (includes public comments and responses)

Appendix N - Glossary

Appendix O - Congestion Management Systems

## D. Goals

The 2001 RTP builds on the considerable effort that went into crafting the 98 Regional Transportation Plan. There is no better example of this continuity and growth than in the 98 RTP Goals. While the language of the 1998 document has been updated and additional emphasis has been placed on subregional and market based solutions, the following goals are taken directly from the 1998 Regional Transportation Plan.

- 1. Improve transportation mobility for all people and enhance the movement of goods within the subregions and the Region.
- 2. Ensure that transportation investments are cost-effective, protect the environment including improving air quality, promote energy efficiency and enhance the quality of life.
- 3. Serve the public's transportation needs in safe, reliable and economical ways, which also meet the individual needs of those who depend on public transit, such as the elderly, handicapped and disadvantaged.

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- 4. Develop regional transportation solutions that complement the subregional transportation systems and the land use plans of communities within the subregions.
- 5. Promote transportation strategies that are innovative and market-based, encourage new technologies and support the Southern California economy.
- 6. Encourage land use and growth patterns that enhance the livability of our communities and maximizes the productivity of transportation investments.

## E. Objectives

| Objective  | Performance Indicator  | Target   |
|--|--|--|
| Mobility   |  |  |
| Transportation System should meet the public need for improved access and for safe, comfortable, convenient, Faster and economical movement of people and goods  | Avg. Work Trip Travel Time in Minutes PM Peak Freeway Travel Speed PM Peak Non-Freeway Travel Speed Percent of PM Pk Travel in Delay (Fwy) | 25 minutes (auto)<br>45 minutes (transit)  |
|  | Percent of PM Pk Travel in Delay (Non-Fwy)   |  |
| Accessibility Transportation system should ensure the ease with which opportunities are reached. Transportation and land use measures should be employed to ensure minimal time and cost.                | Work opportunities within 45 minutes of door to door travel time (mode neutral) Average transit access time                                |  |
| Environment  |  |  |
| Transportation system should sustain the development and preservation of the existing system and the environment (all trips).  | CO<br>ROG<br>NOx<br>PM10<br>PM2.5  | Meet the applicable SIP Emission Budget And the transportation Conformity requirements |
| Reliability  |  | 600/   |
| Transportation system should have reasonable and<br>dependable levels of service by mode (all trips)   | Transit<br>Highway   | 63% on-time arrivals<br>76% on-time arrivals   |
| Safety   |  |  |
| Transportation system should provide minimal accident, death and injury (all trips)  | Fatal Per Million Passenger Miles<br>Injury Accidents  | 0  |
| <b>Livable Communities</b> Growth Visioning Subcommittee has been initiated to further Articulate and evaluate growth, land use and livable communities strategies for inclusion in the next RTP update. |  |  |
| Equity/Environmental Justice   |  |  |
| The benefit of transportation investments should be equitably distributed among all ethnic, age, and income groups (all trips).  | By Income Groups Share of Net Benefits   | Equitable distribution of benefits among all income quintiles.                         |
| Geographic Equity  | Expenditures vs. Benefits  |  |
| Work is continuing in further refining the issue and evaluation methodology. It will be considered for inclusion in the next RTP Update  |  | Equitable distribution of benefits.  |
| Cost-Effectiveness  Maximize return on transportation investment (all trips)  Air Quality  Mobility  Accessibility  Safety   | Return on Total Investment   | Optimize return on transportation investments  |
| Transportation Sustainability Work is continuing in further refining the issue and evaluation methodology. It will be considered for inclusion in the next RTP Update.                                   |  |  |

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## G. **Policies**

The following policies were adopted in the 1998 RTP to help guide regional transportation investments and continue to reflect the transportation policies of the region.

## Policy #1

Transportation investments shall be based on SCAG's adopted Regional Performance Indicators.

## Policy #2

Transportation investments shall mitigate environmental impacts to an acceptable level.

## Policy #3

Major Investment Studies or other major planning studies for regional transportation facilities shall include consideration of freight movement.

## Policy #4

Transportation Control Measures included in the approved State Implementation Plan (SIP) shall be a priority.

## Policy #5

The Regional Transportation Improvement Program (RTIP) shall be developed using the RTP as guidance, and approval shall be based on its consistency with the RTP.

## Policy #6

Implementing freight improvements, advanced transportation technology, airport and seaport ground access and traveler information services, shall be RTP priorities.

## Policy #7

Projects proposed for the RTIP that do not indicate a reasonable phasing of construction between segments will not be approved.

## Policy #8

Commercial airport capacity shall be expanded to serve passenger and freight needs with environmental and ground access impacts being mitigated to an acceptable level.

## Policy #9

All existing and new public transit services, facilities and/or systems shall be fully accessible to persons with disabilities as required by applicable sections of the 1990 Americans with Disabilities Act.

## Policy #10

All existing and new public transit services shall be provided in a manner consistent with Title VI of the 1964 Civil Rights Act and Executive Order 12898 on Environmental Justice,

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including the prohibition of intentional discrimination and adverse disparate impact with regard to race, ethnicity or national origin.

## Policy #11

All existing and new public transit services, facilities and/or systems shall evaluate the potential for private sector participation through the use of competitive procurement, and feasible institutional arrangements.

## **Policy #12**

New freeway facilities shall be open for goods movement except where safety would prohibit this.

## Policy #13

Tolled highway facilities shall be designed, operated and priced to encourage the use of public and private transit, carpools, vanpools and other HOVs. Average vehicle occupancy on the toll facility shall be comparable to similar facilities without tolls.

## Policy #14

Pricing policies may be applied by appropriate agencies to maintain acceptable levels of service of facilities.

## **Policy #15**

Arterial HOV facilities to support transit and rideshare will be supported and encouraged.

## Policy #16

Maintaining and operating the existing transportation system will be a priority over expanding capacity.

## Policy #17

Alternatives to highway expansion must be evaluated before giving regional approval to expand single-occupancy lanes.

## **Policy** #18

Each county should provide environmentally acceptable airport capacity within its own market area to meet local and domestic air passenger demand.

## Policy #19

Airports shall be expanded and added to the system to reinforce regional growth patterns and to make regional communities more livable.

## Policy #20

International facilities should be developed at other commercial airports in the SCAG Region in addition to LAX.

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# 2001 RTP \* TECHNICAL APPENDIX

# SCAG 2001 REGIONAL TRANSPORTATION PLAN Relationship of Goals and Policies to Actions

# ACTIONS

|  |                  |                                    |                  |                           |                     | Ī   | Į                 |               |                        |                  |                   | ſ                 |                   |            |                    |              |                        |   |                         | ļ                |                           |                      |                          | I                        | I                |                                       |                                    |                 |                        |
|--|------------------|------------------------------------|------------------|---------------------------|---------------------|-----|-------------------|---------------|------------------------|------------------|-------------------|-------------------|-------------------|------------|--------------------|--------------|------------------------|---|-------------------------|------------------|---------------------------|----------------------|--------------------------|--------------------------|------------------|---------------------------------------|------------------------------------|-----------------|------------------------|
|  |                  |                                    |                  |                           |                     |     |                   |               |                        |                  |                   |                   |                   |            |                    |              |                        |   |                         | ∢ ∪              | Aviation/<br>Ground       |                      | roN                      | ے                        |                  | _                                     | Land Use                           |                 |                        |
|  |                  | Hig                                | hway             | Highways/Arterials        | als                 |     |                   | Re            | giona                  | Regional Transit | ısit              |                   | Maglev            |            | 9                  | \ spo        | Goods Movement         | nent                                      |                         | Ì                | Access                    | TDM                  | Motorized                | ized                     | ITS              | Tra                                   | Transportation                     | tation          |                        |
| GOALS/POLICIES   | HOV Gap Closures | HOV Connectors Mixed Flow Projects | Sensol Toll/lloT | Smart Street Improvements | stnemevorqml lanets | M&O | Transit Corridors | lisA 19tummoO | Shuttles & Circulators | MST              | Бгоміћ Мападетепі | enotional Actions | Maglev Deployment | тиск Гапез | RR Grade Crossings | RR Corridors | Main Line Productivity | Southwest Passage<br>Seaport Improvements | Inland Port Development | noisneqx∃ hoqriA | firport Travel Management | Carpool Coordination | Park & Ride Improvements | sevitneanl bezinotoM-noV | sinəməvorqmi STI | Incentives for Livable<br>Communities | Location of Efficient<br>Mortgages | eonslag Balance | Activity Center Access |
| Goals  |                  |                                    |                  |                           |                     |     |                   |               |                        |                  |                   |                   |                   |            |                    |              |                        |   |                         |                  |                           |                      |                          |                          |                  |                                       |                                    |                 |                        |
| 1. Improve transportation mobility   | ×                | ×                                  | ×                | ×                         | ×                   | ×   | ×                 | ×             | ×                      | ×                |                   |                   | ×                 | ×          | ×                  | ×            | ×                      | ×   | ×                       | ×                | ×                         | ×                    | ×                        |                          | ×                |                                       |                                    |                 |                        |
| 2. Ensure cost-effective investments   |                  | Н                                  | ×                | ×                         |                     |     | П                 | Ħ             | H                      | ×                | Н                 |                   |                   |            | H                  | H            | ×                      | Н   | H                       | Щ                | ×                         | ×                    |                          |                          | ×                |                                       |                                    |                 |                        |
|  |                  | +                                  | -                |                           | 4                   |     | ×                 | ×             |                        | _                |                   | -                 |                   |            | $\dashv$           | -            | -                      | $\dashv$                                  | -                       |                  |                           |                      |                          |                          |                  |                                       |                                    |                 |                        |
| Coordination with subregions     Demote market based strategies                            |                  | +                                  |                  | ×                         | ×                   | ×   |                   | $\dagger$     | ×                      | ×                | ×                 | ×                 |                   | 1          | ×                  | ť            | ,                      | -   | >                       |                  | ×                         |                      |                          |                          | × >              |                                       |                                    |                 |                        |
| 6. Coordinate land use and growth  |                  | -                                  | <                | -                         | -                   |     | İ                 |               |                        | <u>  ^</u>       | ×                 |                   |                   |            |                    | -            | _                      | }   | +-                      |                  |                           |                      |                          |                          | <                | ×                                     | ×                                  | ×               | ×                      |
|  |                  | _                                  | _                |                           |                     |     |                   |               |                        |                  |                   |                   |                   |            |                    |              |                        |   |                         |                  |                           |                      |                          |                          |                  |                                       |                                    |                 |                        |
| Policies   |                  |                                    |                  |                           |                     |     |                   |               |                        |                  |                   |                   |                   |            |                    |              |                        |   |                         |                  |                           |                      |                          |                          |                  |                                       |                                    |                 |                        |
| 1. Base Investments on Regional Performance  |                  | $\vdash$                           | L                | L                         | L                   |     |                   | r             | H                      | $\vdash$         | F                 | E                 |                   | L          | H                  | H            | H                      | H   | L                       | L                |                           |                      |                          | Г                        |                  |                                       |                                    | L               | L                      |
| indicators<br>2. Mitigate environmental impacts  | × ×              | ×                                  | ××               | ××                        | ×                   |     | ×                 | ×             | ×                      | ×                | ×                 |                   | ×                 | ×          | ×                  | ×            | -                      |   | -                       | ×                | ×                         | ×                    | ×                        | ×                        | ××               |                                       |                                    |                 |                        |
|  |                  |                                    |                  |                           |                     |     |                   |               |                        |                  |                   |                   |                   | ;          |                    | ;            |                        |   |                         |                  |                           |                      |                          |                          |                  |                                       |                                    |                 |                        |
| Include Treignt in Major Investment Studies     Make SIP Transportation Control Measures a |                  | +                                  | -                |                           |                     |     | İ                 | 1             | +                      | -                |                   | +-                |                   | ×          | ×                  | ×            | +                      | -   | -                       |                  |                           |                      |                          |                          |                  |                                       |                                    |                 |                        |
| Priority<br>5. Develop RTIP using RTP  | >                | ×                                  | >                | *                         | >                   |     | >                 | >             | >                      | ×                | ×                 | ×                 | ××                | <b>×</b>   | >                  | ×            | +                      | +   | +                       |                  | ×                         | × ×                  | × ×                      | ××                       | ××               |                                       |                                    |                 |                        |
| 5. Develop KITF using KIF  | +                | +                                  | +                | ۲                         | <b>&lt;</b>         |     | <                 | <             | <                      | +                | $\downarrow$      | Ţ                 | <                 | <          | +                  | <            | +                      | +   | +                       |                  |                           | ٧                    | ٧                        | <                        | ٧                |                                       |                                    |                 |                        |
| <ul> <li>Preight, technology, airport access, information<br/>are priorities</li> </ul>    |                  |                                    |                  |                           |                     |     |                   |               |                        |                  |                   |                   |                   | ×          |                    | ×            | ×                      | ×   | ×                       | ×                |                           |                      |                          |                          | ×                |                                       |                                    |                 |                        |
| <ol> <li>Do not approve RTIP projects without<br/>reasonable phasing plan</li> </ol>       | ×                | ×                                  | ×                | ×                         | ×                   |     | ×                 | ×             | ×                      |                  |                   |                   | ×                 | ×          | ×                  | ×            |                        |   |                         |                  |                           | ×                    | ×                        | ×                        | ×                |                                       |                                    |                 |                        |
| 8. Expand airports with environmental impacts mitigated                                    |                  |                                    |                  |                           |                     |     |                   |               |                        |                  |                   |                   |                   |            |                    |              |                        |   |                         | ×                | ×                         |                      |                          |                          |                  |                                       |                                    |                 |                        |
| 9. Make all transit facilities ADA accessible  |                  |                                    |                  |                           |                     |     | ×                 | ×             | ×                      | ×                | ×                 |                   |                   |            |                    |              |                        |   |                         |                  |                           |                      |                          |                          |                  |                                       |                                    |                 |                        |
| <ol> <li>Provide public transit in consistent with<br/>Environmental Justice</li> </ol>    |                  |                                    |                  |                           |                     |     | ×                 | ×             | ×                      | ×                |                   |                   |                   |            |                    |              |                        |   |                         |                  |                           |                      |                          |                          |                  |                                       |                                    |                 |                        |
| <ol> <li>Evaluate the potential for private sector<br/>participation in transit</li> </ol> |                  |                                    |                  |                           |                     |     | ×                 | ×             | ×                      | ×                | _                 |                   |                   |            |                    |              |                        |   |                         |                  |                           |                      |                          |                          |                  |                                       |                                    |                 |                        |
| <ol> <li>Allow goods movement on new freeways<br/>except where unsafe</li> </ol>           |                  | ×                                  |                  |                           |                     |     |                   |               |                        |                  |                   |                   |                   |            |                    |              |                        |   |                         |                  |                           |                      |                          |                          |                  |                                       |                                    |                 |                        |
| 13. Design toll highway facilities to encourage<br>HOV's                                   |                  |                                    | ×                |                           |                     |     |                   |               |                        |                  |                   |                   |                   |            |                    |              |                        |   |                         |                  |                           |                      |                          |                          |                  |                                       |                                    |                 |                        |
| 14. Pricing may be applied to maintain acceptable levels of service                        |                  |                                    | ×                |                           |                     |     |                   |               |                        |                  |                   |                   |                   |            |                    |              |                        |   |                         |                  |                           |                      |                          |                          |                  |                                       |                                    |                 |                        |
| 15. Encourage arterial HOV facilities for ridesharing and transit                          |                  |                                    |                  | ×                         | ×                   |     | ×                 |               |                        |                  |                   |                   |                   |            |                    |              |                        |   | ļ                       |                  |                           |                      |                          |                          |                  |                                       |                                    |                 |                        |
| <ol> <li>Make operations/maintenance a priority over<br/>expanding capacity</li> </ol>     |                  |                                    |                  |                           |                     | ×   |                   |               |                        | ×                |                   |                   |                   |            |                    |              |                        |   |                         |                  |                           |                      |                          |                          | ×                |                                       |                                    |                 |                        |
| <ol> <li>Evaluate alternatives to highway expansion<br/>for mixed flow lanes</li> </ol>    | ×                | ×                                  | ×                |                           |                     |     |                   |               |                        |                  |                   |                   |                   |            |                    |              |                        |   |                         |                  |                           |                      |                          |                          |                  |                                       |                                    |                 |                        |
| <ol> <li>Provide airport capacity in each County to<br/>meet local demand</li> </ol>       |                  |                                    |                  |                           |                     |     |                   |               |                        |                  |                   |                   |                   |            |                    |              |                        |   |                         | ×                |                           |                      |                          |                          |                  |                                       |                                    |                 |                        |
| <ol> <li>Add airports to the system to reinforce growth<br/>patterns</li> </ol>            |                  |                                    |                  |                           |                     |     |                   |               |                        |                  |                   |                   |                   |            |                    |              |                        |   |                         | ×                |                           |                      |                          |                          |                  |                                       |                                    |                 |                        |
| 20. Develop international facilities at airports other than LAX                            |                  | $\vdash\vdash$                     | $\vdash$         |                           |                     |     |                   |               |                        |                  |                   |                   |                   |            |                    |              |                        |   |                         | ×                |                           |                      |                          |                          |                  |                                       |                                    |                 |                        |